cerebral atrophy is not the result of an ascending degeneration. The amputation of a limb is always followed by a unilateral atrophy of the cord segment corresponding to limb amputated. Above this region the gray substance and the white columns do not show alteration.

These atrophies are not constant enough nor sufficiently circumscribed to aid in the determination of functional topography of the cortical motor zone ELLIOTT.

On the Rule of the Facial Nerve in Secretion of Tears.—By E. Jendrassik. (*Revue Neurologique*, No. 7, 1894.) In two cases of facial paralysis Goldzieher observed that the eye of the affected side remained dry during weeping; he therefore concluded that the lachrymal glands were supplied, not by the trifacial nerve, as is usually taught, but by the facial. Jendrassik, from observations on four cases of facial paralysis, inclines to Goldzieher's opinion. According to J., the lachrymal gland is supplied by the facial nerve as follows: Fibres are given off from the trunk of the facial nerve, as high up as the geniculate ganglion; these fibres run along the great superficial petrosal nerve to the spheno-palatine ganglion; from here one group of fibres is distributed to the soft palate, whilst another unites with the second branch of the trigeminus, another runs into the orbital nerve. The orbital nerve unites with the lachrymal nerve, and the combined nerves give off filaments to the lachrymal gland. MEIROWITZ.

ANATOMICAL.

The Employment of the Weigert-Pal Staining Method for the Central Nervous System Which Has Been Hardened in Formalin.—Magnus (*Neurolog. Centralb.*, Jan. 1, 1895).

Formalin has shown itself to be one of the best hardening agents for macroscopical purposes and nuclear stains. The drawback to it for general use has been, heretofore, that nervous tissue so hardened would not accept the Weigert stain. Dr. Magnus has overcome this difficulty, and has succeeded in staining specimens excellently by employing the following method: After the spinal cord has been in a one-half per cent. solution of formalin for from two to four weeks, small pieces one-half cm. thick are cut off and placed in a solution of Müller's fluid in a bread oven kept at 37 C. for a week. After this they are a day in 95 per cent. alcohol, and then for a day in absolute alcohol, and then follows the imbedding in celluloidin. After the piece has been cut on the microtome the sections are placed again in Müller's fluid, and then put in the bread oven for from a day to a week. The sections are then quickly washed in alcohol and put in the Weigert-Pal hæmatoxylin solution, where they soak for at least two days. The stain which he has thus obtained is very distinct. The myelin sheaths are beautifully blue, and all the degenerated tissue is decolorized. The ganglion cells are very distinct, and their nuclei show clearly. J. C.

PATHOLOGICAL.

A Case of Extensive Ependymal Glioma of the Cerebral Ventricles.—Pfeiffer. (*Deutsche Zeitschr. f. Nervenheilk.*, fifth volume, sixth part.) A thirty-two year-old cigar maker, who had always been healthy, began a year before to have twitchings of the head and eyes, these gradually increased in intensity, and were followed, after four months, by marked protrusion of the eyeballs. These were accompanied by psychical depression, slight degree of stupor, headache without definite localization and clonic convulsions in a part of the neck and face muscles. Later, right side Graefe's symptom, nystagmus, pupils equal, reactions normal, diminution of acuity of vision, opthalmoscopically, retinitis albuminurica. Tremor of the hand, but not intentional in character. Slowing of the pulse and attacks of vomiting when the headache was very severe. Right patellar reflex lost, left weak. Great variation in the symptoms from day to day. In the further course of the disease there appeared progressive diminution of sight, retinitic atrophy of the disc, double abducens paralysis, dilatation of the right pupil with slow reaction. Convulsive drawing of the face toward the right side, high degree of stiffness on attempts at movement, and pain of the cervical portion of the spinal column. Increasing stupor, slight attacks of unconsciousness, great slowing of the pulse, Cheyne Stokes respiration. Double-sided ptosis, great limitation of the movability of the eyes, deviation of the tongue to the right. Incontentia urinæ et alvæ.

Autopsy showed the ependyma of both lateral ventricles had lost its glistening appearance, and presented a grayish white and red swellings. These swellings were in the form of compact hard granulations in some places, while in other localities there was a more diffuse infiltration and a lessened consistency. Similar conditions were found in the extensions of the third and fourth ventricles, and in the aqueduct of Sylvius. Histological examination of the tumor masses found in the ventricles left the matter in doubt as to the real nature of the new growth. In some sections it resembled a glioma, in others a mixed form, glio-sarcoma. Considering the extensive and diffuse infiltration, the gradual development of the disease, the fine fibred structure of the supporting tissue, its peculiar light colored appearance, its vascularity and the retrogressive metamorphosis that was present, the author was struck with its similarity to the process that goes on in gliosis spinalis. J. C.

A Case of Glioma in the Dorsal Portion of the Pons.—Jolly. (*Archiv. f. Psych. und Nervenheilk*, vol. xxvi., part 3.) The history of the case reported is briefly as follows: Duration of disease, less than two years. First symptom, left side facial paralysis. A month later vertigo, vomiting, and trouble in swallowing which disappeared after a week and did not return for three months. At this time subjective disturbance of vision, which perhaps depended on a paralysis of the muscles for winking of the left side. Simultaneously with this conjugate eye muscle paralysis developed; weakness of the muscles of mastication on the left side, and anæsthesia in area supplied by the left trigeminus. A little later, weakness and lessened sensibility of right arm, which condition remained to the end. Later, similar disturbances in the left leg, then continuous numbness of sensibility in the right leg. The paralysis of the muscles of winking of left side was permanent till death, and toward the end a weakness of the same muscles on the right side was seen. Frequent attacks of weakness and vomiting, but no convulsions. Absence of choked discs. Diagnosis was new growth in the region of the pons, and as left facial paralysis was associated with conjugate deviation of the eyes to the right, it was considered that the tumor in its development had involved the nuclei of the facial and abducens. At the postmortem, the cerebellum was pushed up, and under it, springing up from the bottom of the fourth ventricle, was a very large, grayish-white tumor; toward the cerebrum it was traceable to the aqueduct of Sylvius and spinalwards to the calamus scriptorius. The tumor lay substantially in left side of the bottom of the ventricle; apparently did not break through the ependyma of the ventricle, but to arch it up the raphe was pushed over to one side. The spinal end of the tumor, like a small plug, extended down and against the medial side of the left corpus restiforme. The trigeminus, as well as the facial and abducens, were somewhat flattened and transparent. The other cranial nerves, including the oculomotorius and trochlearis, seemed normal macroscopically. Microscopically it was found that the tumor had its greatest extent in the region of the origin of the facial and abducens nerves, and that it had destroyed the nuclei of those nerves not only on the side where it lay,